

## REMARKS

Claims 1-46 were pending at the time of the Office action. Claims 1, 37 and 38 are amended. Claims 47 and 48 are newly added. No new matter is added. Accordingly, claims 1-48 are pending in the application.

### **Claim Rejections Under 35 U.S.C. 102**

In paragraph 2 of the Office action, claims 1, 2, 4, 5, 19-39, 41-43, 45 and 46 were rejected under 35 U.S.C. 102(b) as being anticipated by Katoh ("Katoh," U.S. Patent No. 4,406,204).

Applicant respectfully traverses the rejection of claims 1, 2, 4, 5, 19-39, 41-43, 45 and 46 over Katoh in that these claims recite features that are distinguished over Katoh.

However, to expedite issuance of this application as a patent, Applicant has amended independent claim 1 to recite, among other features, "formant detection means for analyzing a first musical tone signal to detect formant characteristics of the first musical tone signal[.]" (Emphasis added.)

On page 4 of the Office action, the Examiner stated: "[F]urther clarifying that the formant detection is detection from analyzing a first input musical tone signal, or something to that effect, would distinguish the claims from Katoh." (Office action, page 4.)

Accordingly, as noted above, claim 1 has been amended to recite "formant detection means for analyzing a first musical tone signal to detect formant characteristics of the first musical tone signal." (Emphasis added.)

As previously explained in Applicant's Amendment of August 8, 2008, Katoh discloses that a musical tone is synthesized by controlling harmonic components of a depressed key in accordance with one of various fixed formants. (See Abstract and Col. 1, lines 9-18.) As such, Katoh does not disclose or suggest "formant detection means for analyzing a first musical tone

signal to detect formant characteristics of the first musical tone signal[.]" as recited in amended claim 1. (Emphasis added.)

At least for the reasons explained above and for reasons previously explained in Applicant's Amendment of August 8, 2008, it is believed that claim 1 is not anticipated by Katoh.

At least because claims 2, 4, 5, 19-36, 41-43, 45 and 46 depend from claim 1, it is believed that these dependent claims are not anticipated by Katoh.

Independent claim 37 has been amended to recite, among other features, "analyzing a first musical tone signal to detect formant characteristics of the first musical tone signal[.]" (Emphasis added.)

Independent claim 38 has been amended to recite, among other features, "a formant detector for analyzing a first musical tone signal to detect formant characteristics of the first musical tone signal[.]" (Emphasis added.)

At least for reasons similar to those explained above with respect to independent claim 1, it is believed that independent claims 37 and 38 are not anticipated by Katoh.

### **Claim Rejections Under 35 U.S.C. 103**

In paragraph 4 of the Office action, claims 3, 6-9 and 40 were rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh and further in view of well-known prior art.

In paragraph 5 of the Office action, claims 10-18 and 44 were rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh and further in view of Suzuki et al. ("Suzuki," U.S. Patent No. 5,691,496).

The rejections of the above claims are respectfully traversed.

Claims 3 and 6-9 depend from claim 1, and claim 40 depends from claim 38. As previously explained, claims 1 and 38 are not anticipated by Katoh. It is believed that well-known prior art does not address the above-noted distinctions between claims 1 and 38 and the Katoh reference. Therefore, Applicant respectfully submits that claims 3, 6-9 and 40 are not unpatentable over Katoh and further in view of well-known prior art.

Claims 10-18 and 44 depend from claim 1. As previously explained, claim 1 is not anticipated by Katoh. It is believed that Suzuki does not address the above-noted distinctions between claim 1 and the Katoh reference.

Furthermore, as previously explained in Applicant's Amendment of December 6, 2007, Suzuki teaches away from certain features of the embodiment claimed in claim 1. In addition, as also previously explained in Applicant's Amendment of December 6, 2007, Suzuki does not disclose or suggest features recited in claims 10-18.

At least for the reasons explained, it is believed that claims 10-18 and 44 are patentable over Katoh and further in view of Suzuki.

#### **New Claims**

New claims 47 and 48 depend indirectly from claim 1. At least for this reason, it is believed that these new dependent claims are patentable over the cited references.

Further, new claim 47 recites: “. . . wherein the setting means sets the modulation level at the fixed center frequency of at least one of the frequency bands by interpolation processing based on the formant characteristics at a plurality of frequencies.” (Emphasis added.)

Further, new claim 48 recites: “. . . wherein the setting means sets the modulation level at the fixed center frequency of at least one of the frequency bands by using a polynomial interpolation of the formant characteristics at a plurality of frequencies.” (Emphasis added.)

Support for these features can be found, for example, in paragraphs [0052] to [0058] on pages 11-12 of this application.

It is believed that the recited features further distinguish these claims over the cited art.

While Applicant respectfully traverses the Examiner's interpretation of the term "modulating," even under the Examiner's interpretation of Katoh as disclosing "set[ting] this frequency's amplitude to the value of that frequency's amplitude" (see Office action, page 3), Katoh does not disclose or suggest "... wherein the setting means sets the modulation level at the fixed center frequency of at least one of the frequency bands by interpolation processing based on the formant characteristics at a plurality of frequencies[,]" as recited in new dependent claim 47. (Emphasis added.)

Similarly, Katoh does not disclose or suggest "... wherein the setting means sets the modulation level at the fixed center frequency of at least one of the frequency bands by using a polynomial interpolation of the formant characteristics at a plurality of frequencies[,]" as recited in new dependent claim 48. (Emphasis added.)

As such, new dependent claims 47 and 48 are further distinguishable over the cited art.

### **Concluding Remarks**

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or

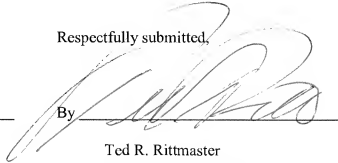
incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date

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By



FOLEY & LARDNER LLP

Customer Number: 23392

Telephone: (213) 972-4594

Facsimile: (213) 486-0065

Ted R. Rittmaster

Attorney for Applicant

Registration No. 32,933